AMENDMENT TO CLAIMS

Please amend claim 33 as indicated below. Please cancel claims 85-91, 114-136, and 141-153 without prejudice to future prosecution. The following listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

Claims 1-32 (canceled)

Claim 33 (**currently amended**): A synthetic antigen presenting matrix for activating $CD4^+$ T cells comprising:

a) a support;

b) an extracellular portion of a MHC class II heterodimer operably linked to the support and capable of loading a selected peptide; and

c) an extracellular portion of at least one accessory molecule operably linked to the support such that the extracellular portions of the MHC class II heterodimer and accessory molecule are present on the matrix in sufficient numbers for activating $CD4^+$ T cells when a peptide is loaded onto the extracellular portion of the heterodimer, wherein the accessory molecule is selected from the group consisting of: a costimulatory molecule which is B7.1 or B7.2; an adhesion molecule which is ICAM-1, ICAM-2, ICAM-3, LFA-1 or LFA-3; and a survival molecule which is Fas ligand, TNF-receptor or CD70; and wherein at least one of the MHC class II heterodimer and the accessory molecule is not naturally linked to the support.

Claim 34 (withdrawn): The matrix of claim 33 wherein the support is a cell fragment.

Claim 35 (original): The matrix of claim 33 wherein the support is a cell.

Claim 36 (original): The matrix of claim 35 wherein the extracellular portion of the MHC molecule is linked to the cell by a transmembrane domain of the MHC class II heterodimer.

Claim 37 (withdrawn): The matrix of claim 33 wherein the support is a liposome.

Claim 38 (withdrawn): The matrix of claim 33 wherein the support is a solid surface.

Claim 39 (original): The matrix of claim 33 wherein the extracellular portion of the MHC class II heterodimer is linked to an epitope which reacts with an antibody to link the portion to the support.

Claim 40 (original): The matrix of claim 33 wherein the extracellular portion of the Class II MHC heterodimer is linked to $(His)_6$ which reacts with nickel to link the portion to the support.

Claim 41 (withdrawn): The matrix of claim 33 wherein the support is a porous material.

Claim 42 (original): The matrix of claim 33 wherein the peptide is loaded onto the extracellular portion of the MHC class II heterodimer.

Claim 43 (original): The matrix of claim 33 wherein the extracellular portion of the MHC class II heterodimer is empty.

Claim 44 (original): The matrix of claim 33 wherein the accessory molecule is a costimulatory molecule.

Claim 45 (original): The matrix of claim 44 wherein the costimulatory molecule is B7.1 or B7.2.

Claim 46 (original): The matrix of claim 33 wherein the accessory molecule is an adhesion molecule.

Claim 47 (original): The matrix of claim 46 wherein the adhesion molecule is ICAM-1, ICAM-2, ICAM-3 or LFA-3.

Claim 48 (original): The matrix of claim 33 wherein the accessory molecule is a survival molecule.

Claim 49 (original): The matrix of claim 48 wherein the survival molecule is Fas ligand or CD70.

Claim 50 (original): The matrix of claim 33 having a first accessory molecule and a second accessory molecule.

Claim 51 (original): The matrix of claim 50 wherein the first accessory molecule is a costimulatory molecule and the second accessory molecule is an adhesion molecule.

Claim 52 (original): The matrix of claim 51 wherein the costimulatory molecule is B7.1 or B7.2 and the adhesion molecule is ICAM-1.

Claim 53 (original): The matrix of claim 50 wherein the first accessory molecule is a costimulatory molecule and the second accessory molecule is a survival molecule.

Claim 54 (original): The matrix of claim 50 wherein the first accessory molecule is a survival molecule and the second accessory molecule is an adhesion molecule.

Claim 55 (original): The matrix of claim 54 wherein the survival molecule is CD70 and the adhesion molecule is ICAM-1.

Claim 56 (original): The matrix of claim 50 wherein the first and second accessory molecules are costimulatory molecules.

Claim 57 (original): The matrix of claim 56 wherein the costimulatory molecules are B7.1 and B7.2.

Claim 58 (original): The matrix of claim 50 further comprising a third accessory molecule.

Claim 59 (original): The matrix of claim 58 wherein the first accessory molecule is a costimulatory molecule, the second accessory molecule is an adhesion molecule, and the third accessory molecule is a survival molecule.

Claim 60 (original): The matrix of claim 59 wherein the costimulatory molecule is B7.2, the adhesion molecule is ICAM-1 and the survival molecule is CD70.

Claims 61-99 (canceled)

Claim 100 (withdrawn): A method for activating $CD4^+$ T cells in vitro, the method comprising:

a) providing the matrix of claim 33;

b) loading the MHC class II heterodimer with a peptide; and

c) contacting the peptide-loaded cell matrix with the $CD4^+$ T cells, thereby inducing the contacted $CD4^+$ T cells to proliferate and differentiate into activated $CD4^+$ T cells.

Claim 101 (withdrawn): The method of claim 100 further comprising the step of separating the activated $CD4^+$ T cells from the matrix.

Claim 102 (withdrawn): The method of claim 101 further comprising the step of adding the activated $CD4^+$ T cells to an acceptable carrier or excipient to form a suspension.

Claim 103 (withdrawn): The method of claim 102 further comprising the step of administering the suspension to a patient.

Claims 104-136 (canceled)

Claim 137 (withdrawn): A method for activating $CD4^+$ T cells in vitro, the method comprising:

a) contacting a synthetic antigen presenting matrix according to claim 33 with a peptide library in vitro for a sufficient time to generate a peptide-loaded MHC class II heterodimer for activating $CD4^+$ T cells; and

b) contacting the peptide-loaded MHC class II heterodimer of step a) with $CD4^+$ T cells, thereby inducing the contacted $CD4^+$ T cells to proliferate and differentiate into activated $CD4^+$ T cells.

Claim 138 (withdrawn): The method of claim 137 further comprising:

c) separating the activated $CD4^+$ T cells from the APC.

Claim 139 (withdrawn): The method of claim 138 further comprising the step of adding the activated $CD4^+$ T cells to an acceptable carrier or excipient to form a suspension.

Claim 140 (withdrawn): The method of claim 139 further comprising the step of administering the suspension to a patient.

Claims 141-153 (canceled)